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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/517,813	03/02/2000	Eric Raust	35452-12980	5391

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EXAMINER

CORSARO, NICK

ART UNIT PAPER NUMBER

2684

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/517,813

Applicant(s)

RAUST ET AL.

Examiner

Nick Corsaro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 02/02/2004 have been fully considered but they are not persuasive.

Due to the applicant's amendments to the claims, new grounds of rejection have been applied. The following addresses the applicant's arguments pertaining to the new grounds.

The applicants features in claims 1-26, and 32-34, wherein method and system for communication between earth terminals and satellites includes: a plurality of satellites tune able to selected frequencies; a plurality of earth terminals for transmitting and receiving messages, in some cases bursty messages of different type; by: defining sub bands to accommodate a plurality of regulatory requirements in one or more countries; assigning each earth terminals to one of the satellite; selecting a sub band and a center frequency within the sub band for the satellite receivers; tuning the receiver to a channel, and informing the earth terminals of the channel for transmitting messages, read upon Walcott in view of Li, as follows.

Wolcott is discussing a CDMA satellite system, where the system forms sub bands centered around a center frequency for transmission and reception to earth terminals. Wolcott discusses that the sub bands are formed according to a predefined frequency plan, and that each earth terminal is assigned a sub-band, centered on a frequency, and a CDMA code channel within that frequency. Therefore, Wolcott discloses the limitations of "method and system for communication between earth terminals and satellites includes: a plurality of satellites tune able to selected frequencies; a plurality of earth terminals for transmitting and receiving messages". Wolcott further discusses CDMA transmitters, where CDMA transmitters are burst transmitters.

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Therefore, Wolcott is disclosing the feature of "a plurality of earth terminals for transmitting and receiving messages, in some cases bursty messages of different type". Wolcott discusses creating the sub bands according to a predefined frequency plan, where in most cases unless over the ocean, frequency plans must fall within the limitations of a national or international governing body. Wolcott discloses assigning the earth terminals to a channel based on a CDMA code. Therefore, Wolcott disclosed "defining sub bands to accommodate a frequency plan in one or more countries; assigning each earth terminals to one of the satellite; selecting a sub band and a center frequency within the sub band for the satellite receivers; tuning the receiver to a channel, and informing the earth terminals of the channel for transmitting". Wolcott did not specifically discuss the governing bodies and therefore did not disclose the limitation of accommodating a plurality of regulatory requirements, therefore, Li was used to modify Wolcott to show the limitation.

The applicants arguments with respect to claims 27-31, 35, and 36 wherein a method and system for communications includes having at least one satellite with a receiver configured to receive a plurality of bursty messages having a first size of a plurality of sizes, where earth terminals send the messages, and load is tracked of the incoming messages such that the receiver in the satellite is configure to receive messages of a second of a plurality of sizes, reads upon Koraitim in view of Wolcott as follows. Koraitim is discussing receiving multimedia data from earth terminals at a satellite, where the satellite inherently has a receiver. Koraitim further discusses that the receiver will conform to receive constant message sizes and variable messages sizes, where the variable messages sizes are of bursty nature. Therefore, Koraitim discloses the limitations of "at least one satellite with a receiver configured to receive a plurality of bursty

messages having a first size of a plurality of sizes, where earth terminals send the messages, and load is tracked of the incoming messages such that the receiver in the satellite is configured to receive messages of a second of a plurality of sizes". Koraitim discusses the method and system, but fails to disclose the receiving in the satellite, therefore, Wolcott modifies to show a satellite with receivers.

Therefore, the argued limitations are written such that they read upon the cited references.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10, and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolcott et al. (6,317,583) in view of Li et al. (6,269,245).

Consider claim 1, Wolcott discloses a method of communication between earth terminals and satellites (see col. 1 lines 22-27). Wolcott discloses providing a plurality of satellites, each satellite having at least one receiver tunable to a selected frequency (see col. 2 lines 1-8). Wolcott discloses providing a plurality of earth terminals adapted to send messages to, and receive messages from, the plurality of satellites (see col. 2 lines 1-40 and col. 3 lines 5-20). Wolcott discloses defining at least one sub band of the frequency spectrum; assigning at least one sub band to each satellite receiver (see abstract lines 15-21, col. 2 lines 1-40, col. 3 lines 5-20, and col. 3 lines 35-57, where Wolcott is discussing assigning the channels based on a frequency plan). Wolcott discloses assigning each earth terminal to one of the satellite receivers;

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selecting a center frequency for the communication channel for each receiver within the sub band assigned to that receiver; tuning each satellite receiver to the communication channel selected for that receiver (see col. 2 lines 1-40, col. 3 lines 5-20, and col. 3 lines 35-57, where Wolcott discusses assigning earth terminals satellite receivers transmitting a sub band comprising one or more CDMA channels on a particular frequency formed with a particular code). Wolcott discloses informing at least the listening earth terminals of the communication channel selected for the receiver to which each earth terminal is assigned; transmitting messages from the earth terminals to the respective assigned satellite receivers at the selected communications channel (see col. 2 lines 3-15, and col. 4 lines 39-47, where Wolcott discusses assigning a channel, CDMA code to the earth station on a selected center frequency sub band).

Wolcott discloses assigning sub bands to satellite receivers based on a frequency plan for a region (col. 1 lines 60-67, abstract lines 15-21, col. 1 lines 20-27), however does not specifically disclose assigning to accommodate a plurality of regulatory constraints and requirements for one or more countries. Li teaches assigning to each satellite receiver to accommodate a plurality of regulatory constraints and requirements for one or more countries (see col. 1 lines 10-24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Wolcott, and assign to each satellite receiver to accommodate a plurality of regulatory constraints and requirements for one or more countries, as taught by Li, thus allowing the use of all available channels within a zone by reusing the assigned channels, as discussed by Walcott (col. 1 lines 22-33).

Consider claims 2 and 3 Wolcott discloses providing step comprises providing a plurality of satellites, each satellite having at least one receiver tunable to a selected frequency and at least one satellite having a plurality of receivers, each receiver being tunable to a selected frequency (see col. 2 lines 1-67, and col. 3 lines 1-56).

Consider claims 4-10, Wolcott discloses defining the sub bands, based on a frequency plane channel use, and load, and where channels assigned are based on spacing, power, distance, exclusions, and range (see col. 3 lines 35-67, col. 4 lines 1-38, col. 12 lines 30-67, col. 13 lines 1-67, col. 11 lines 15-62, col. 12 lines 10-67, and col. 14 lines 5-67, where Wolcott is discussing channel assignment based on load, and movement of the mobile terminals, i.e., movement corresponds to changes in power and range).

Consider claim 32, Wolcott discloses a communication system (see col. 1 lines 22-28). Wolcott discloses a plurality of earth terminals for sending messages (see col. 1 lines 50-55). Wolcott discloses at least one satellite having at least one satellite receiver for receiving a plurality of burst type of messages from said earth terminals (see col. 2 lines 1-54, and col. 4 lines 39-46, where Wolcott is discussing CDMA mobiles, said mobile being Burst type transmitters and receivers). Wolcott discloses at least one gateway control center for storing sub band information and assigning to at least one satellite the sub band information to accommodate a sub band frequency plans to accommodate frequency reuses within the region (see abstract lines 15-21, col. 1 lines 20-27, where Wolcott is discussing col. 1 lines 55-67, and col. 2 lines 1-67, where Wolcott is discussing frequency plans).

Wolcott discloses assigning sub bands to satellite receivers based on a frequency plan for a region (col. 1 lines 60-67, abstract lines 15-21, col. 1 lines 20-27), however does not

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specifically disclose assigning to accommodate a plurality of regulatory constraints and requirements for one or more countries. Li teaches assigning to each satellite receiver to accommodate a plurality of regulatory constraints and requirements for one or more countries (see col. 1 lines 10-24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Wolcott, and assign to each satellite receiver to accommodate a plurality of regulatory constraints and requirements for one or more countries, as taught by Li, thus allowing the use of all available channels within a zone by reusing the assigned channels, as discussed by Wolcott (col. 1 lines 22-33).

Consider claims 33, and 34, Wolcott teaches changing the sub bands based on load and therefore, over time (see col. 2 lines 1-54, col. 12 lines 30-67, and col. 13 lines 1-67).
compensate for changing load.

3. Claims 11-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolcott in view of Li as applied to claim 1 above, and further in view of Zhao et al. (6,332,069).

Consider claims 11-26, Wolcott discloses, the method as modified by Li above. Wolcott and Li disclose sub band definition and changing the sub bands based on changing the gateway to associated area, to accommodate a plurality of regulatory constraints and requirements for one or more countries (see Wolcott col. 14 lines 5-26, and Li col. 1 lines 10-24). Wolcott and Li do not specifically disclose changing according burst transmission and slot assignment or assigning. Zhao teaches changing according burst transmission and slot assignment (see col. 8 lines 30-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Wolcott and Li, and change the sub bands based on burst and slot

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assignment, as taught by Zhao and Li, thus using all available channels in a region to alleviate call blocking, as discussed by Li (col. 1 lines 58-67, col. 2 lines 1-21) and Zhao (col. 4 lines 20-28).

4. Claims 27-31, 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koraitim et al. (6,370,117) in view of Wolcott et al. (6,317,583).

Consider claims 27, and 35 Koraitim discloses a method of communication between earth terminals and at least one satellite (see col. 1 lines 5-13). Koraitim discloses providing at least one satellite, each satellite inherently if not obviously having at least one receiver (see col. 1 lines 1-27). Koraitim discloses each receiver being configured to receive a plurality of bursty type messages having a first size of a plurality of sizes (see col. 5 lines 10-55, col. 2 lines 45-52, col. 1 lines 38-52, col. 5 lines 10-67, col. 6 lines 1-40, col. 7 lines 1-21, and col. 1 lines 17-27, where Koraitim discusses constant bit rate data, and multimedia variable bit rate bursty data of many sizes and types, i.e., a plurality of types). Koraitim discloses providing a plurality of earth terminals adapted to send messages to, and receive messages from, the at least one satellite (see col. 1 lines 1-67). Koraitim discloses tracking the load of all incoming messages on each receiver; and reconfiguring at least one receiver to receive messages having a second size of the plurality of sizes in response to the message load (see col. 2 lines 43-67, col. 3 lines 1-35, col. 5 lines 10-67, col. 6 lines 20-56, col. 7 lines 10-44, and col. 8 lines 1-44, where Koraitim is discussing that depending on the traffic load, and the type and size of variable bit rate data more channels at the receiver are allocated to accommodate the data). Koraitim does not specifically disclose each satellite having a receiver. Wolcott discloses a receiver (see col. 2 lines 1-12). It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the invention of Koraitim, and have a receiver, as taught by Wolcott, thus allowing duplex communications on the satellite.

Consider claims 28-31, and 36, Koraitim discloses transceiving variable messages sizes, however does not specifically disclose changing the sub bands bases on load. Wolcott teaches changing the sub bands based on load (see col. 2 lines 1-54, col. 12 lines 30-67, and col. 13 lines 1-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Koraitim, and change the sub bands based on load, as taught by Wolcott, thus allowing and adjustment of the number of assigned frequencies long with time slots to compensate for changing load.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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6. Any inquiry concerning this communication should be directed to Nick Corsaro at telephone number (703) 306-5616.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung, can be reached at (703) 308-7745. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth, Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 customer Service Office whose telephone number is (703) 306-0377.



Nick Corsaro

Primary **NICK CORSARO**
PATENT EXAMINER